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ABSTRACT

This document contains the following papers on social studies from the SITE (Society for Information Technology & Teacher Education) 2001 conference: (1) "Teacher's Guide to the Holocaust: An Extensive Online Resource for Teachers" (Ann E. Barron and others); (2) "Preparing a Virtual Field Trip To Teach Value of Community and Sense of Place" (Candy Beal); (3) "Weaving a Collective Text: A Cooperative Experience" (Cleci Maraschin and others); (4) "Developing an Understanding of the Social Studies through Technology-Rich Quest Projects" (Gregory A. Coverdale); (5) "StarFestival: A Multilinear Approach to Cultural Identity" (Kari Heistad and Shigeru Miyagawa); (6) "Using Presidential Candidate Web Sites for K-12 Lessons" (James S. Lenze); (7) "Technology and Social Studies Teacher Education--Results from a National Survey" (Cheryl Mason and others); (8) "Web-Based Delivery of a Generic Research Methods Modules (for Social Sciences): The Graduate and Post-Graduate Experience" (Robert J. McClelland); and (9) "Multimedia Resource File: A Practical Project for Preservice Teachers" (Leah P. McCoy and others). Most papers contain references. (MES)

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SOCIAL STUDIES

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Integrating technology meaningfully in social studies remains a major issue in education. Nevertheless, the papers in the social studies section represent varied, creative, thoughtful and meaningful applications of technology for powerful social studies teaching and learning. Each of the papers provide a type of case study model and ideas for meaningfully integrating technology in social studies. The papers also are broad representations allowing for adaptation a various levels.

Teacher's Guide to the Holocaust by Barron, Calandra, and Kemker offers an overview regarding an invaluable website developed resource for teaching the Holocaust. The papers is thorough in describing and analyzing the process for developing the project as well as the actual components of the site. The paper also provides an excellent case study and model for like projects.

The paper by Beal, *Preparing a Virtual Field Trip* focuses on constructivist approaches to technology integration such as meaningful and real world applications. The paper suggests that developing virtual field trips are engaging projects for teachers and students. Specific themes include community, service learning, and character building.

The paper by Coverdale on *...Technology-rich Quest Projects* uses the thematic strand for social studies as suggested by the National Council for the Social Studies. AsiaQuest is used as the case study and model for an analysis of integrating technology, quest projects, and the NCSS themes. The paper also addresses specific issues regarding the definition, rationale, and goals of social studies.

StarFestival by Heistad and Miyagawa describes a multimedia project on the themes of diversity and cultural identity. The package is personalized by using one person as the case study focus for individual identity and development . The goal is to allow students to engage in self discovery of personal identity and worth.

McClelland's paper, entitled *Web-based Delivery of a Generic Research Methods Module* offers a modle of a web-supported teaching and learning project. The paper describes the module and research associated with determining its effectiveness. A variety of issues related to web-based teaching and learning are analyzed including attitudes, learning styles, adaptation, and future projects.

Multimedia Resource File by McCoy, Miller, and Bender describes a project that is intended as a practical application resource for technology and content integration in teaching and learning. Specific components described include internet applications, analyzing effective resources, and products. This paper provides an example of the potential of the internet for powerful social studies teaching and learning.

The final paper in the section by Pye entitled *Are Middle School Social Studies Teachers in a Technological Quandary* focuses on important issues in the integration of technology in middle school social studies. The paper looks at the concept of middle school education and technology as a tool to enhance teaching and learning. The case study describes and analyzes the application of technology in sample middle school social studies classroom in Missouri.

In conclusion, these papers provide critical insight regarding the successful integration of technology in social education at various levels. The case study and model approach used by the authors provide opportunities for interested parties to adapt the ideas in meeting individual needs. The integration of technology in social studies education has made great strides as is evidenced in these papers. We still have a great distance to travel however.

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Teacher's Guide to the Holocaust: An Extensive Online Resource for Teachers

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Abstract: The Teacher's Guide to the Holocaust is a large, instructional website with over 7,000 HTML pages. It was designed and developed by graduate students in the Instructional Technology program and the staff of the Florida Center for Instructional Technology, College of Education, at the University of South Florida. The program was designed to provide an overview of the Holocaust through text, original source documents, graphics, photographs, art, movies, and music.

The primary audience of the Teacher's Guide to the Holocaust is preservice and inservice teachers. The site allows them to view the Holocaust through three different "lenses"--Timeline, People, and the Arts. Additional resources are provided in the Student Activities and Teacher Resources sections. Now in its 4th year, the site receives over two million hits per month from educators and students all over the world. This paper provides background information on the evolution of the project, design considerations, and development issues.

Introduction

The Holocaust remains one of the most effective and extensively documented subjects for an examination of basic humanitarian issues; it provides a window into the understanding of the complex elements of human behavior. Through a study of the Holocaust, students and teachers alike can develop an understanding of the ramifications of prejudice and racism, and they can begin to gain insight into the meaning of responsibility for both individual and community actions.

In 1994, Florida became the first state to enact a law requiring instruction in the history of the Holocaust (Brogan, 1997). The law was championed by, among others, Stephen Spielberg, director of Schindler's List. The text of the law reads:

> The history of the Holocaust (1933-1945), the systematic, planned annihilation of European Jews and other groups by Nazi Germany, a watershed event in the history of humanity, to be taught in a manner that leads to an investigation of human behavior, an understanding of the ramification of prejudice, racism, and stereotyping, and an examination of what it means to be a responsible and respectful person, for the purposes of encouraging tolerance of diversity in a pluralistic society and for nurturing and protecting democratic values and institutions.
>
> The Holocaust Education Bill (SB 660)

Although the law mandated Holocaust education, very few of Florida's teachers were adequately prepared to teach this sensitive subject. To help meet the need for teacher preparation and curriculum resources, the Florida Center for Instructional Technology, along with the Instructional Technology program in the College of Education at the University of South Florida, created the online resource, *A Teacher's Guide to the Holocaust* (http://fcit.usf.edu/holocaust).

The *Teacher's Guide* is designed to provide an overview of the Holocaust through text, original source documents, graphics, photographs, art, movies, and music. This website allows preservice and inservice teachers to view the Holocaust through three different "lenses"--Timeline, People, and The Arts. Additional resources are provided in the Student Activities and Teacher Resources sections.

The primary goal of the website has been to provide a "starting point" for Holocaust resources, research, and education for teachers. The site provides over 1,000 photographs, hundreds of source documents, numerous panoramas of concentration camps, traditional Jewish music, annotated bibliographies, blackline handouts, maps, and other materials. All of these resources can be used in classrooms for instructional purposes.

A secondary goal of the website has been to serve as a basis for research studies related to preservice teachers' knowledge and attitudes of Holocaust. Several research studies are underway to assess their preparation to teach topics related to tolerance and prejudice.

Design

The initial design for the *Teacher's Guide to the Holocaust* was created in 1995 by graduate students in an Advanced Design course. The graduate students spent several weeks determining the appropriate content areas and the optimal structure for the site. Existing websites were examined, and alternative instructional strategies were explored. The final composition of the *Teacher's Guide to the Holocaust* presents an overview of the Holocaust from three different perspectives: Timeline, People, and The Arts. The website also includes sections related to Classroom Activities and Teacher Resources.

The *Timeline* section presents the story of the Holocaust chronologically along a detailed timeline of history. This section focuses on the rise of the Nazi party, Hitler's final solution, the rescue and liberation of Nazi death camps, the Nuremberg trials, and the aftermath. Topics are supported with over 1,200 photographs of the war in Europe and copies of transcripts and documents from the Nuremberg Trials and other historical events. This section is designed to serve as a concise point of reference for teachers.

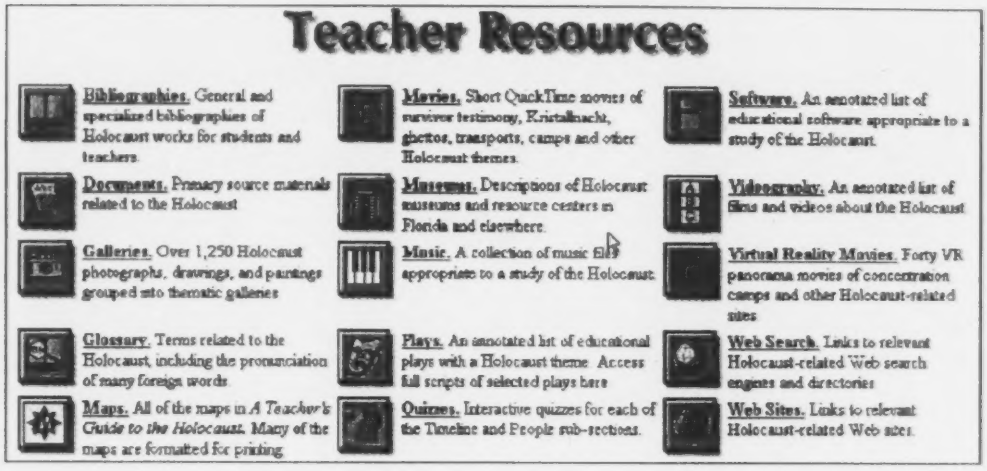
The *People* section exhibits the behaviorist categories of people in time of war. In this section, the focus is not only on victims, but also on bystanders, perpetrators, collaborators, resisters, rescuers, liberators, survivors, and children. *People* also celebrates the resisters and rescuers of the Holocaust, with a special dedication to the Righteous Gentiles who placed their lives in danger to save Jewish people. The Survivor section personalizes the Holocaust by including links to numerous first-hand stories of survivors.

The *Arts* section demonstrates that despite the Nazi's attempts at dehumanization, victims and survivors of the Holocaust held onto the parts of themselves that made them most human. This section contains a gallery of the Arts—music, literature, and visual arts. In *Music*, teachers and students have the ability to hear traditional Jewish music and songs written during the Holocaust in both the camps and ghettos. *Literature* includes the works of playwrights -- materials that teachers are able to incorporate into their study of the Holocaust. The *Visual Arts* section contains the works of David Olere, an artist who survived the Holocaust, as well as other art created by victims of the Holocaust.

The *Teacher Resources* section provides teachers with a wealth of reference materials, including the following (see Figure 1):

Bibliographies:	General and specialized bibliographies of Holocaust works for students and teachers.
Documents:	Primary source materials related to the Holocaust.
Galleries:	Over 1,250 Holocaust photographs, drawings, and paintings grouped into thematic galleries.
Glossary:	Terms related to the Holocaust, including the pronunciation of many foreign words.
Maps:	Maps dealing with events related to World War II.
Movies:	Short QuickTime movies of archival footage and survivor testimony.

Museums:	Descriptions of Holocaust museums and resource centers in Florida and elsewhere.
Music:	A collection of music files appropriate to a study of the Holocaust.
Plays:	An annotated list of educational plays with a Holocaust theme --access to full scripts of selected plays.
Quizzes:	Interactive quizzes for each of the Timeline and People sub-sections.
Software:	An annotated list of educational software appropriate to a study of the Holocaust.
Videography:	An annotated list of films and videos about the Holocaust.
VR Movies:	Forty virtual reality panorama movies of concentration camps and other Holocaust-related sites.
Web Sites:	Links to relevant Holocaust-related Web sites.


Teacher Resources
Bibliographies. General and specialized bibliographies of Holocaust works for students and teachers.
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Videography. An annotated list of films and videos about the Holocaust.
Galleries. Over 1,250 Holocaust photographs, drawings, and paintings grouped into thematic galleries.
Music. A collection of music files appropriate to a study of the Holocaust.
Virtual Reality Movies. Forty VR panorama movies of concentration camps and other Holocaust-related sites.
Glossary. Terms related to the Holocaust, including the pronunciation of many foreign words.
Plays. An annotated list of educational plays with a Holocaust theme. Access full scripts of selected plays here.
Web Search. Links to relevant Holocaust-related Web search engines and directories.
Maps. All of the maps in A Teacher's Guide to the Holocaust. Many of the maps are formatted for printing.
Quizzes. Interactive quizzes for each of the Timeline and People sub-sections.
Web Sites. Links to relevant Holocaust-related Web sites.

Figure 1. Teacher Resource Section

The *Classroom Activities* section presents a series of lesson plans, targeted glossaries, quizzes, and integrated units that can be used across the disciplines. Each lesson describes the learning objective, appropriate grade level, materials needed, and procedure. This section also contains a "Submit an Activity" area, where teachers can send their own lesson plans or submit suggestions for revisions of the lessons plans in the database.

Development

The program was developed to run with low-end browsers (version 2.0 and above) on either Macintosh or PC computers. For ease of navigation, an image-map was placed at the top and bottom of each page. These image-maps and the Site Map (which is accessible from every page) facilitate the movement from one section to another (see Figure 2). An Index is also available for easy access to relevant topics.

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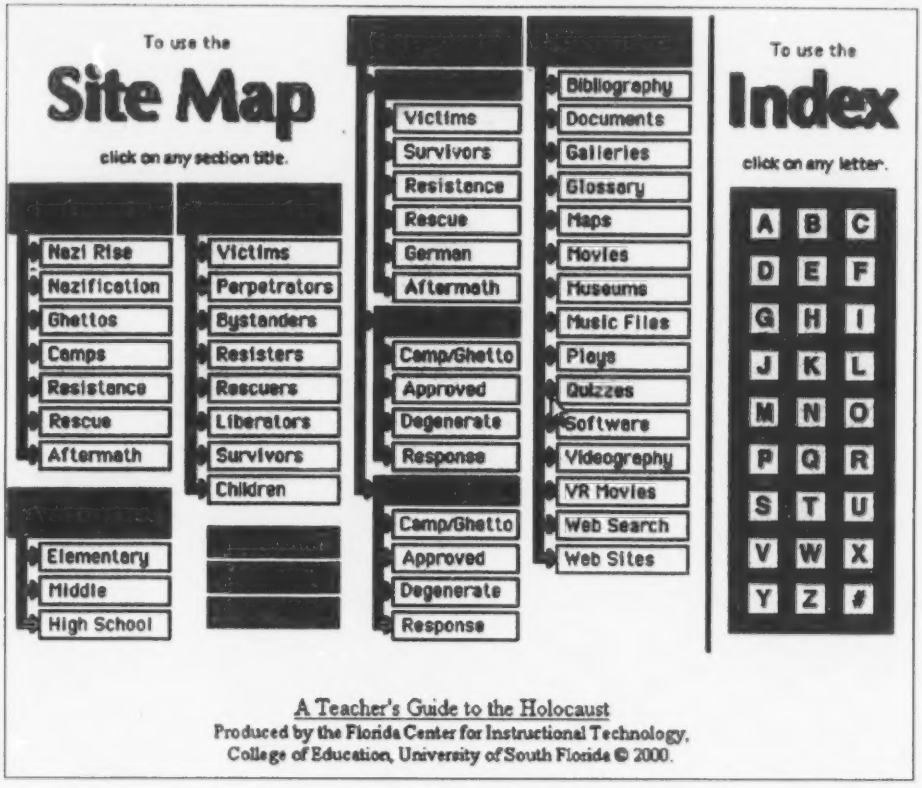

Figure 2. Site Map

Several techniques were used to create the vast array of resources available on the site. For example, in order to provide immediate, client-side feedback and a mild level of interactivity, the Quizzes were created using Macromedia CourseBuilder. The software allowed items to be created using a variety of formats including, radio buttons, check boxes, drag-and-drop and more. Feedback was provided in the form of pop-up dialogue boxes with comments such as, "Good job," or "Try again." In some circumstances, feedback was provided in the form of correct answers. All questions were multiple-choice and their content was created and validated by a team of Holocaust and measurement experts working on *The Teachers' Guide*.

All of the movie and sound files were created in QuickTime because it allows for delivery of both audio and video files over the Web and on CD-ROM. QuickTime is a universal plug-in for multimedia in Web browsers. Multimedia that is created in QuickTime will perform equally as well on Windows and Macintosh computers.

The paper manuscripts of the music were accessed from the public domain at the university library. A musician was then hired from our university to create the music on a MIDI keyboard. The MIDI file was then saved as a QuickTime file.

The Holocaust survivor movie files were originally recorded on an analog video camera at the Tampa Bay Holocaust Museum. Permission was granted from each of the survivors. The VHS videotapes were then transferred to a digital video camera, allowing the movies to be edited on a computer. Each one of the videos was then reduced to short one-minute clips. Finally, we compressed the movies to reasonable file sizes for use over the web.

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A TEACHER'S GUIDE TO THE HOLOCAUST

Timeline • People • Arts • Activities • Resources

Anita Mayer

Anita Mayer tells her story of arrest and life in a concentration camp.

MOVIE "They're here to get us."

MOVIE "To a big concentration camp in the Netherlands."

MOVIE "We had to work."

MOVIE "And the next second they were gone."

MOVIE "We might be able to live."

MOVIE "We haven't lost the war yet."

MOVIE "These boys were our source of information."

MOVIE "He is dead."

MOVIE "And we were on our own."

Return to Moves

Virtual Reality movies, which are a series of individual photographs combined together to create a 180 to 360 degree panoramic effect, were created for use with the Holocaust web site. Photographs were taken at actual Holocaust related sites and stitched together using Adobe Photoshop to clean image quality and VR Authoring Studio to stitch and export the panoramic image. This process involves bringing a seamless transition from one photograph to the next. From an educational perspective, the VR movie allows for the usage of virtual field trips in the classroom environment.

Dissemination

The primary vehicle for distribution of the project is the Web. The Florida Center for Instructional Technology maintains a Windows NT web server at USF. File management and maintenance are monitored closely, and revisions and updates can be done on a routine basis. The website currently receives over two million hits per month, and links to it have been established from hundreds of websites throughout the United States, Europe, the Middle East, and other parts of the world.

Although delivery through the Web is optimal in many circumstances, there were sufficient reasons to create a version of the program for delivery on CD-ROM. One of the major restraints of Web delivery is that not all teachers have access to the Web. Therefore, a CD-ROM-based version was created and distributed to every school in the state of Florida.

The analysis, design, development, and dissemination of a large-scale instructional project such as the *Teacher's Guide to the Holocaust* is a major undertaking. Version One was disseminated in 1997; Version Two in 1999; and Version Three in 2000. With each subsequent version, additional photographs, content, and other

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resources have been added to the site. In addition to the new and updated releases on the Web (for the worldwide audience), 5,000 copies on CD (of each version) have been distributed to Florida schools.

Research

In order to pilot test the effectiveness of the website, and to determine the amount of factual knowledge preservice teachers have of historical events surrounding the Holocaust, two research instruments have been created. One instrument assesses the factual knowledge related to the Holocaust. The second instrument is an attitudinal survey that was designed to measure the subjects' attitudes towards traditionally marginalized groups. An initial study was conducted in the Spring of 2000 with 200 preservice teachers (Calandra, Fitzpatrick, Barron, 2000). Follow-up studies are scheduled for the Fall and Spring of this academic year. Answers to important questions such as the depth of knowledge related to the Holocaust and correlations between knowledge and attitudes can impact the design of teacher education and the design of future versions of the *Teacher's Guide to the Holocaust*.

Response

The response to *A Teacher's Guide to the Holocaust* has been overwhelming. Over two million hits are registered on the site each month. E-mail messages related to the site arrive daily from educators and students all over the world. Students often send questions about the Holocaust as they are working on their homework; teachers send appreciation notes and ideas for enhancement of the site. Based on the e-mail messages, educators are especially grateful for the concise information, the hundreds of photographs, and the access to the source documents. The music section, maps, lesson plans, and the virtual reality movies of the concentration camps are also features that teachers find especially useful.

The *Teacher's Guide to the Holocaust* has received major recognition from well respected Holocaust sites. The Cybrary of the Holocaust links to the project with these words:

> Amazing...simply amazing. Student activities, timeline, links, and much more. "A Teacher's Guide to the Holocaust" offers an overview of the people and events of the Holocaust. Extensive teacher resources are included (http://remember.org/educate.htm).

The website has also received dozens of awards. The online *Encyclopedia Britannica* has listed it among the "Web's Best Sites" with the following citation:

> Carefully designed with an extensive collection of materials, this guide provides an excellent resource not only for teachers and students but for anyone who wants to learn about the Holocaust.

Continuous updates and revisions are underway. Holocaust educators and historians throughout the world continue to contribute to the resources and information in the *Teacher's Guide to the Holocaust*. Through the generosity and collaboration of these Holocaust experts, this site will continue to grow and offer a major resource for Holocaust education.

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Preparing a Virtual Field Trip to Teach Value of Community and Sense of Place

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Abstract: This research paper discusses the value of engaging preservice teachers in the development of a virtual field trip. Research in psychology, sociology and education suggests the importance of engaging both teachers and students in activities that promote the development of a sense of place. Taking a field trip of the community provides students with a sense of belonging and support and gives the community a better idea about school activities. Virtual field trips may be use pre-, post- or in place of an actual field trip. During the actual field trip, students use digital cameras to record historic sites and later use *HyperStudio* to prepare the virtual field trip. Preservice teachers experience the field trip and prepare the virtual tour so they may know the power of this activity in building community connections and a greater sense of place.

A great deal is expected of preservice teachers today, not the least of which is proficiency in technology skills. Building a virtual field trip is one way that our teachers become familiar with technology that is easy to use and to teach to their students. Wrapped into the virtual field trip is additional value in the form of its ability to foster a sense of community and place.

Sense of place is not what it was years ago. We are a much more mobile society. This often means that there is no extended family to provide the support families need. Children may be reared by single parents or in homes where both parents work and are unable to spend a great deal of time nurturing their children. Family circumstances affect parenting skills, relationships, and may even endanger a family's survival. Teachers are all too familiar with the effects of lack of family support.

For many children our classrooms become a sanctuary that bolsters them up and prepares them to meet the world. Rather than serving as just a safe haven, we should be helping them explore, contribute and make their mark on their immediate world. As teachers, we tend to see adolescents in our arena. Sometimes we forget that they are already part of a much larger circle. James Garbarino, a proponent of the ecology of adolescent development, explains that youth evolve in interrelated environments (Garbarino, 1985). The four areas most closely connected to them are home, peers, school and community. Adolescents develop based on their experiences and these areas are their reality. The nature and number of connections among these areas determine how fully developed and supported a person is in her life. A strong connection to the community can serve as an anchor and give a student a solid support base on which to rely. For an adolescent in the throes of an identity search, a sense of place can provide a feeling of well being and give the student the freedom to grow by taking risks that they might not have otherwise attempted.

Teachers, too, need the sense of place that knowing and interacting with the community provides. They can better know the culture from which their students come if they know the cultural heritage of the different areas of the city. Studying the city helps one know its needs and opportunities that exist for your class to engage in community service (Arnold & Beal, 1995). Finally, it enables the community to know what is going on in the schools. We cannot expect unqualified support if we do not show them the worth of our students and our programs.

For the past five years preservice undergraduate teacher education students have been part of the Great Raleigh Trolley Adventure. They take a two hour guided tour of the city, complete with stories about historic sites and peoples that have been gleaned from original source documents (Beal, 1992). Some of the tales are taken from private family diaries and newspaper accounts. Throughout the tour students use digital cameras to record each of the memorable stops. One hundred and fifty preservice teachers have taken the tour and follow-up discussions and questionnaires indicate a much stronger sense of community and place and a greater commitment to doing the same thing with the students they will teach.

Students return to the university, select the site they wish to further research and prepare a fact sheet on their site. Next, they must consider the audience for the virtual field trip and prepare their text accordingly. Students are

taught *HyperStudio* and each prepares a card or cards with the digital image and text box. Some students are more sophisticated and can add audio, animation or quiz items that give immediate feedback. One student is usually responsible for the title card and another the city map, which is highlighted with the sites to be studied. Buttons are added to connect each of the student=s cards into one stack. Those using the virtual field trip can select a specific site on the map and be taken to the student=s card, which has an image and description of the site.

Preservice teachers can use the virtual field trip activity as a research hook before they take their own students on a field trip. It is useful after the trip as a follow-up and means of assessing what was learned or can be used in place of a field trip if the funding for off campus learning experiences is limited. Most schools have a computer, *HyperStudio* and a digital camera. If a digital camera is not available, a regular one can be used. Regular film can be developed and put on a disk or trip pictures may be scanned to a disk.

Virtual field trips work on many different levels. Service learning: When students are taking the real-life field trip they learn about their community and its needs. The community does the same. This information often leads to teacher or student suggested service learning projects to help the community. Virtual trips can be put on the web and shared with the community. Technology skills development: Students learn how to use the digital camera to record historic sites and later practice their computer skills by using *HyperStudio* to combine the digital images with text boxes and build the virtual field trip stack. Empowering: Trolley-told stories presented in the form of dramatic narrative show that history, often thought dry and boring, can be exciting. Students are empowered and see themselves as the Keepers of the History. Social studies takes on a whole new meaning. Students are eager to preserve and retell the stories to family and friends. Sense of Place: Students become invested in the community and see themselves as leaders in training. They make contributions that are recognized and valued and they feel confident in taking on a larger role as a community helper. Above all, they belong and have another arena in which to be successful and supported.

By using the virtual field trip activity, preservice teachers experience what they will help their own students feel someday, a growing sense of appreciation for their community and a stronger sense of place. The Raleigh Trolley has been used at all levels -- preservice teachers, community leaders, regular classroom teachers and middle school children. Most have followed the tour with the virtual field trip activity. Some have individually prepared virtual tours of a single site and donated the work to that site for their use. Connecting to the community both in a real and virtual sense has proven to be an experience students rate as memorable and the one thing they report they will replicate in their own classroom.

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Weaving a Collective Text: A Cooperative Experience

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Abstract: This paper is a report on the experiences of a post-graduate multisciplinary team of students attending the Cognitive Ecology and the Technologies of Intelligence Course and
their Lecturer, while working in a collective text construction and using a collaborative writing tool named The EquiText. It presents the analysis of the text construction as an end of semester extra-class asynchronous work, based on Varela's observer notion in the cognitive ecology field and in Maturana's concepts of organization and structure. At the same time the group was testing their own 'conivence' environment in this tool, which had recently been available for local use.

Introduction: The Choice Of The Threads

This work is the result from the learning experience of a group of post-graduate students at the Universidade Federal do Rio Grande do Sul in the construction of a collective text, using a software of collective authorship, the EquiText. Concepts of Maturana (1999), as organization and structure, in addition to the Varela's observer ontology notion, provide the basic theoretical support for this analysis. These concepts are also shared to a certain extent with other researchers interested in the study of the construction of the ecology of knowledge and its relation with the new technologies of the intelligence, like Pierre Lévy (1993), Gregory Bateson (1991), Francisco Varela (1997), Félix Guattari (1993), and others.

An observer as any human being, when operating in the language with other human beings, participates with them in the constitution of a domain of coordinated actions as a domain of distinctions and in this way he/she can generate descriptions and descriptions of descriptions. The relations between the components that define a compound unity as a simple unity of a certain type, constitute its *organization*. Thus, the organization of a compound unity constitutes its class identity, conserving itself as a whole of invariable relations. The components and the relations between the components which constitute a particular compound unity as a compound unity of a particular type, constitute its *structure*. The relations that constitute the organization of a compound unity takes place as a subgroup of these relations which takes

place in its structure. The structure includes more relations than those which define an organization. For this reason, the conservation of the organization does not imply the conservation of the structure. The structural transformations may come from the changing in the characteristics of the components of the compound unity or by the changing in the relations, that may produce itself in an episodic or recurrent way (Maturana, 1999).

Mazzochi (2000) mentions several sites and environments of collective constructions in the area of arts. In the area of collective construction of texts we can mention, for instance, the RCT (Remote Collaboration Tool), which represents a multidisciplinar effort to improve the interaction quality among students and among students and instructors in foreign language courses at the University of California in Davis, since 1997. (Walters, 2000)

Thus, building a text with several hands, from distinct points and different times, on a certain theme, and using a special tool to develop such a task, can be a positive, constructive, and enjoyable experience. If the team of participants are sufficiently motivated and predisposed to share their individual ideas with the whole group - on an specific theme - for the sake of constructing a significant and discursive text in a cooperative and/or collaborative mode in its lay-out.

A Virtual Environment: The Weaver's Loom

The virtual environment used to catalyze the creation of this "coexistence space", the EquiText, (Fig. 1), was first developed by a multidisciplinary group of students attending the Tele-Education Course at the Post-Graduate Program in Computer Sciences in Education (PGIE), at the Federal University of Rio Grande do Sul (UFRGS), in Porto Alegre, RS, Brazil.

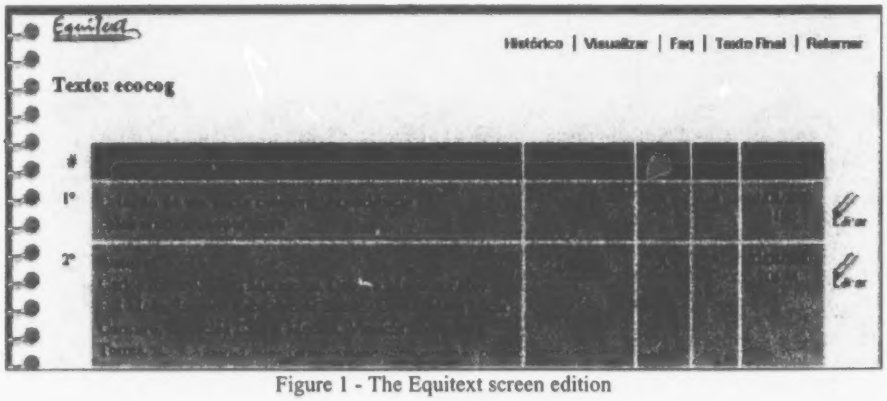

Figure 1 - The Equitext screen edition

The EquiText is the fruitful result of a study-project which constituted the extension course on "Tools and Techniques of Groupware". It was first designed during the 'Tele-Education' Course of the PGIE Program at UFRGS, during the second semester of 1999. It was then launched as a group contribution to the mentioned project, which initially aimed at qualifying teachers and educators to the new distance education standards set out by the Brazilian Government. The description and analysis of the results of this project and the first version of the EquiText can be find in (Rizzi et al. 2000a and 2000b).

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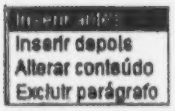

Figure 2 - Edition tool

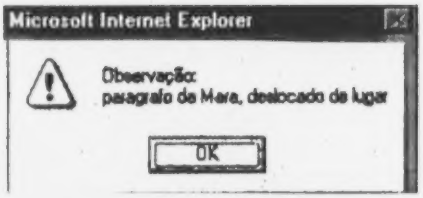

Figure 3 - Sample of a comment text

This tool has then been conceived to give support to the production of collaborative and/or cooperative texts, and it was based on the 'paragraph' concept. This conception facilitates the display of the individual written contributions, allowing the inclusion, alteration, creation of new paragraphs, as well as the exclusion of any existing paragraph unfit to the text in progress - an important move to guarantee the coherence of the text as a significant whole (Fig.2). Besides, it also allows the inclusion of comments, as exemplified in (Fig.3), which constitute short texts in attachment.

According to Lévy, "the word 'text', in its etymology, contains the old feminine technique of weaving. It is perhaps the fact of this knitting of verbs and names through which we tried to retain the meaning, to be designated by an almost textile term, be not a coincidence". (Lévy 1999)

The paragraph concept adopted in the EquiText considers a title of a text in construction as well as one sole line as individual and identified paragraphs with a number in sequence, beginning with the number 1. That numbering is altered dynamically, according to the "movement" of the participation of its team-members.

The Experience: Weaving the Threads

The group of students who participated in the elaboration of this text-experience and in this analysis is constituted by the lecturer of the course in "Cognitive Ecology and Technologies of the Intelligence" and her students - the authors of this paper - all linked to the Post-Graduate Programs of Social and Institutional Psychology and Computer Sciences in Education at the Federal University of Rio Grande do Sul (UFRGS).

We, the authors, come from different backgrounds, such as Psychology, Mathematics, Languages, Biology, Computer Sciences, Engineering, among others, transforming this collective text writing activity a coexistence space in the 'alterity'. It is understood here that the experience of a collective writing is not constituted of a mere representation of ideas and that it follows a pre-conceived organization. It rather constitutes an updated recreation to each written interaction.

The experience under analysis had been accomplished in approximately two weeks. During this period, the group underwent two main processes: first, they were getting acquainted with the environment - by using the EquiText properly while discussing how to start the proposed task; second, the very few ones who dared to start writing their collaborations in the EquiText, by constructing their new paragraphs subject to alteration or substitution moves, not only triggered off important reflections upon the task in process but also motivated the other participants to go on in the collective text creation.

Thus, during the writing process, the text had been built resembling at times a patchwork quilt or a mere registration of ideas still not well connected. Knots were given others untied, as if an assembling of a knitting of ideas was in its way while the writing operating process took place, releasing the text which covers and illustrates the present analysis. It is important to mention that this text is one of the possible actualizations of the several roads which were opened up in the virtuality of the writings registered in the EquiText domains. We could have produced other texts if any other potential version had been actualized.

The use of a virtual environment echoed differently in the team members. The participations were of different intensities, having at every moment the observer's glance modified, pointing out this come and go of several points of view. The testing and the discovery of the environment itself, the experimentation of

unusual ways of interaction, the coupling to that other kind of authorship, all these aspects made it possible to create and recreate in this new coexistence space.

Despite the fact that this environment had not been conceived to promote personal interactions in real time, an interesting experience happened during the construction of this text. In the exact moment that the students Rose and Janete elaborated the initial paragraphs in the EquiText, the student Luciane made her contributions to the text. And such actions could be visualized in the screen, at the very movement of the occurrence of the collaborative act.

Technically, this event could be read as a deficiency of the environment, since this tool does not foresee and/or control the access competition. If this fact could generate confusion in some users, who may get surprised with a text in the screen different from that one just edited, in others, new sensations were actually felt while witnessing this irrecognition of the text in motion. That characteristic reveals the asynchronous aspect of the authorship action in the text: participants, of distant points, in different machines, cooperating collectively in the EquiText environment, in that very moment.

Another interesting fact was the oddity in relation to the entire joint of ideas placed in the text. Some participants manifested their disagreement with certain ideas and arguments. This fact proposed an instigating reflection: a collective text does not necessarily express the integrity of each author's suppositions; it may well occur a concomitant recognition/irrecognition of the text being produced. As being different from an individual text, where this process can happen in the *a posteriori*, it seemed to us that in a collective text that partial domain of the directions and connections of ideas, which may release this irrecognition feeling, is already present in the movements of the proper writing.

While this collective experience was taking its course, we could accompany the happening of different writing positions and styles, with different discourse levels. For the very programming of the environment the operation existed in the text itself, through the inclusion and exclusion actions, alteration of paragraphs and inclusion of comments on the text that has been created. In a meta-writing level, the movement of the auto-organization of this group, where critical comments and of positioning were done ON the text; the very textual texture in action could be seen as an important component towards a construction of a hypertext.

The active participation of those involved in the 'weaving of the text' promoted significant structural alterations up to the last moment when it embodied its current form, displayed in the EquiText under the function "Final Text". It did not lose its inner organization as a good written text, though.

Thus, what may we consider for an analysis of a collaborative text production in which the individual " I " or the several individual " I " give place to another " I ", this time collective? Facing this new idea of a 'cyborguian' being , the following inquiries still strike us:

- Could the individual knowledge be really disturbed by a collective mind, to the point that the individuality takes place in a multiple territory?
- Could this text written in a collaborative way be considered a product of a collective mind?

These questions reveal some evidence that the insertion of technological tools in learning environments bring about disturbances both in singular and collective levels. The interesting aspect in this experience with the EquiText is that the theoretical reflection takes place in the same happening of the collective writing. There is no anteriority of the ideas as they materialize themselves in the act of the reflexive writing when they happen to be inserted, altered, substituted or even excluded from the paragraphs in progress.

As we examine the organization of a collectively written text, where the collaboration of one participant may affect or unchain the collaboration of the other (s), we observe that there is an open, dynamic structure, virtually transformable, that works according to the flavor of the movement of the participants' thoughts. The team members get involved in finding a way to participate in accordance to their thinking, though collaboratively enough to be able to co-build a new knowledge - more enlarged and significant. It is the social cooperation, accomplished in its own activity by means of the latest technological tools, in conjunction with the old and battered verbal signs - exactly one of the more significant distinctive aspects of the human species. And associated with the use of the individuals psychological tools, it constitutes the natural phenomenon that modifies its reality.

In this sense, it can be thought then in terms of the texture concept or in a heterogeneous net of senses that is constituted in its own accomplishment, where each author has already inbuilt his/her own net:

> " As each one of us was several, he/she was already a lot of people. We used everything that approximated us, the closest and more distant... Not to get to the point that it is not said 'I' anymore, but to the point in that no longer he/she has any importance to say or not to say ' I'. We are not the same ones any longer. Each one will recognize his/her " I ". We were helped, aspirated, multiplied ". (Deleuze & Guattari, 1995).

But, after all, which text is not collective? Are we not all participants of a polymorphic net of ecological ideas, in which each of us can only know who we are from the notion of who are we not? We are the text.

> " The text is placed in movement, taken in a flow, vetorized, metamorphic. It is thus closer of the very movement of the thought, or of the image that we make of him today. The text always subsists, but the page gets hidden. The page, that is, the Latin pagus, the field, the territory located within the white of the margins, cultivated of lines and sowed by the author of letters, characters. The page, still heavy of the mesopotamic clay, always adhering to the earth of the neolithic, this very old page, hides itself slowly under the high informational surface, its disconnected signs will rejoint the numeric (digital) wave. Everything happens as if the numberization (digitalization) would establish a type of an immense semantic plan, accessible all over the place, for which each one could contribute to produce, to bend diversely, to retake, to modify, to refold ..." (LEVY, 1993).

We are a collective of brains that are a collective of neurones in interaction. In this simultaneous and heterogeneous writing a kind of refolding of the text takes place, where ideas of authors formerly distant become close and because of this closeness they become irrecognized. A topological sequential, where the ideas are clamped without necessarily producing a logical sequency.

Some Considerations: After all, What Did We Weave?

To what conclusions did we arrive with this work of co-authoring in a team and at distance, using a tool - the EquiText - exactly build for that purpose? In spite of the initial adaptation in the utilization of the EquiText, and of the inherent challenges of a collaborative writing, the accomplished results satisfied the expectations, or even overcame them, regarding the construction of a text " with several hands and brains ".

Our experience configured in an existence spot, propitiating action and reflection, and to a certain extent allowing us our own transformation as well as the entire group in this coexistence episode. In this way, the EquiText domain provided resources not only for the collective construction of a text, but also for its (re) construction. In this way, its construction in a theory-practice congruence makes it possible to discuss how the coupling of the cognitive systems to the technologies can transform the manners of thinking individually and collectively.

Nevertheless, some questions continue instigating us and provoking other reflections:

- that the recognition of the knowledge built in a shared way can, ultimately, result in a larger knowledge, where the minor portions of knowledge, here seen as individual, partial, may actually aid to the constitution of the major consensual knowledge of the group;
- that new kinds of experiments may result from cognitive group productions where the participation of a larger number of people have the privilege to cooperate in the construction of science;
- that a collaborative experience of text elaboration by several people via the EquiText - a favorable environment for such an experience - where what one writes may become the substratum to what the other(s) want(s) to express, even if some part(s) previously registered is/are lost, can be an important moment of reflection over the property of knowledge, an issue on its validation after the scientific world.

From what was previously exposed, it results clear that we find ourselves in a domain where a lot of questions are left for further and deeper discussions. From what has been discussed so far, based on the 'cognitive ecology' notion of Bateson & Guattari and Maturana's concept of the 'ontology of the observer', we may already dare to insert a bridge here to link the sciences, in order to create a textual/theoretical territory, where the concepts are woven and an organization becomes a mutant structure. In other words, it is no longer possible to think in a subject-author interaction without thinking in the collective.

The notion of individual authorship is then illusory in the intertextuality process, the same as the illustrations embroidered in a rug: they give us an illusion of being separated, but if we observe them more closely, they are mere colored parts of an immense texture. And so is the text, so is the subjectivity, so are WE.

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Developing an Understanding of the Social Studies Through Technology-rich Quest Projects

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Abstract: One of the difficulties of teaching and learning in K-12 social studies classrooms is the "fuzziness" of the discipline. What do we mean by social studies? The *Curriculum Standards for Social Studies: Expectations of Excellence* (NCSS 1994) provide a detailed framework for describing the curricular foci of the social studies by dividing the social studies into ten thematic organizational units. These themes are further delineated by performance standards for the early grades, middle grades, and high school. This paper is a qualitative document analysis of a technology-rich, interdisciplinary curriculum produced by Classroom Connect, a major producer of technology education products. This analysis focuses on the social studies themes present in one specific Quest project: AsiaQuest.

Introduction

Social studies is regarded as a major school subject and is taught in K-12 schools nationwide (NCSS 1994). However, because social studies is multidisciplinary and interdisciplinary, it is often difficult to define. The National Council for the Social Studies (NCSS) defines social studies as follows:

> Social studies is the integrated study of the social sciences and humanities to promote civic competence. Within the school program, social studies provides coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. The primary purpose of social studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world.

Thousands of K-12 students worldwide participate in Classroom Connect Quest projects each semester. How does the curriculum content contained in the technology-rich projects correlate with the social studies themes and the performance expectations established by the NCSS? The purpose of this paper is to provide an overview of the AsiaQuest project and a correlation of the AsiaQuest content to the NCSS themes.

Classroom Connect Quest projects are Internet-based projects that promote active, inquiry-based learning in K-12 classrooms. Teachers subscribe to Classroom Connect and receive an extensive curriculum guide, a user id, and a password. A different Quest project is offered each semester and each Quest follows the same curricular format. Other Quest topics have included MayaQuest, AfricaQuest, GalapagosQuest, JapanQuest, AmericaQuest, and AustraliaQuest. In the spring 2001 semester, the Quest team will revisit MayaQuest. In each Quest, participants communicate with a team of scientists and explorers traveling the designated Quest region via bicycle.

Each Quest provides an inquiry question that focuses all participants' inquiries. AsiaQuest explores Venice, Italy to Beijing, China. However, there is much controversy surrounding the historical account of Polo's journey and thus AsiaQuest poses this question: "Did Marco Polo really go to China?" In Polo's writings, he fails to mention or describe many elements of Chinese culture: tea, chopsticks, Chinese calligraphy, and the Great Wall (Classroom Connect 1999). In her

book *Did Marco Polo Go to China?*, Frances Wood (1996) provides extensive evidence that questions Polo's presence in China. Particularly perplexing is how Polo could have not described the Great Wall in his writings. The first to raise the issue formerly was the secretary to Lord Macartney, the first British ambassador to China:

> The first European who published any account of that empire, Marco Polo, has made, however, no mention of the wall; tho as he travelled over land to the capital of China, it is presumed he must have passed through it from Tartary in some spot where the wall now stands. From such silence some doubts have arisen…whether the wall was really in existence in the thirteen century (Wood 1996, p. 99).

This quote is interesting because it mentions Polo's failure to describe the wall but also suggests that perhaps the Great Wall didn't exist in the thirteenth century. However, Wood (1996) counters this possibility with evidence from her research into the wall's construction and its material composition at various points in history. Wood states:

> My feeling is that even without serious wall-building or wall-repairing efforts, there would have been much of the tamped earth wall surviving in the thirteenth century and that it would have been very difficult to have traveled into China from the West without noticing it; thus the omission of the Wall in the *Description of the World* is telling (Wood 1996, p. 101).

In researching Polo's travels, students have a chance to debunk the historical account of Polo's travels or confirm Polo's adventures based on evidence found by the Quest team in China and in documents provided in the Quest project and other resources.

The scope of this paper does not allow a detailed correlation of AsiaQuest content to all ten NCSS themes nor can the analysis extend across the full K-12 curriculum. Thus, selected NCSS themes in the *middle* grades will be analyzed. In the section below, each table will list the NCSS theme, selected performance expectations, and where those expectations correlate to AsiaQuest activities in the curriculum guide. Performance expectations indicate what students should know and be able to do in relation to the larger theme.

Theme 1 – Culture

Social studies programs should include experiences that provide for the study of *culture and cultural diversity* so that the learner can:

NCSS Performance Expectation	AsiaQuest Activity	Page
A. compare similarities and differences in the ways groups, societies, and cultures meet human needs and concerns.	Background Cultural Exchange	50 116
B. explain how information and experiences may be interpreted by people from diverse cultural perspectives and frames of reference.	Dan's Dilemma Create a Quilt	65 116
C. explain and give examples of how language, literature, the arts, architecture, other artifacts, traditions, beliefs, values, and behaviors contribute to the development and transmission of culture.	Myths & Legends Chinese Poetry	65 115

Table 1 – Culture

Theme 2 – Time, Continuity, & Change

Social studies programs should include experiences that provide for the study of *the way human beings view themselves in and over time*, so the learner can:

NCSS Performance Expectation	AsiaQuest Activity	Page
A. demonstrate an understanding that different scholars may describe the same event or situation in different ways but must provide reasons or evidence for their views.	Culture Shock History Mystery	68 69

B. identify and use key concepts such as chronology, causality, change, conflict, and complexity to explain, analyze, and show connections among patterns of historical change and continuity.	History Mystery	69
E. develop critical sensitivities such as empathy and skepticism regarding attitudes, values, and behaviors of people in different historical contexts.	Kid Profile Culture Shock Silk Road Lifestyles	67 78 116

Table 2 – Time, Continuity, & Change

Theme 3 – People, Places, & Environments

Social studies programs should include experiences that provide for the study *of people, places, and environments*, so the learner can:

NCSS Performance Expectation	AsiaQuest Activity	Page
A. elaborate mental maps of locales, regions, and the world that demonstrate understanding of relative location, direction, size, and shape.	Silk Road Map Geography Graphing	7 112 114
B. create, interpret, use, and distinguish various representations of the earth, such as maps, globes, and photographs.	Board Game New Silk Road	115 115
I. describe ways that historical events have been influenced by, and have influenced, physical and human geographic factors in local, regional, national, and global settings.	Debate Asian Culture	112 113

Table 3 – People, Places, & Environments

Theme 9 – Global Connections

Social studies programs should include experiences that provide for the study of *global connections and interdependence*, so the learner can:

NCSS Performance Expectation	AsiaQuest Activity	Page
A. describe instances in which language, art, music, belief systems, and other cultural elements can facilitate global understanding or cause misunderstanding.	Cultural Exchange Chinese Poetry	116 115
B. analyze examples of conflict, cooperation, and interdependence among groups, societies, and nations.	Transportation Asian Culture History Mystery	114 113 109
G. identify and describe the roles of international and multinational organizations.	Culture Shock Kid Profile Myths & Legends	104 107 95

Table 4 – Global Connections

The NCSS themes and performance expectations above are correlated to specific AsiaQuest activities. Many of these activities recur from week-to-week. For example, Dan's Dilemma provides a different inquiry Dilemma each week. In the section below, the weekly themes are correlated to specific inquiry questions.

Discussion

The performance expectations in the NCSS standards "should enable students to exhibit knowledge, skills, scholarly perspectives, and commitments to American democratic ideals (NCSS 1994, p. 14). Using the standards to frame social studies curricula leads to *powerful* social studies. "Social studies teaching and learning are powerful when they are meaningful, integrative, value-based, challenging, and active (NCSS 1994, p. 162). In the analysis below, AsiaQuest's powerful curricular activities and themes are described.

AsiaQuest Themes and Inquiry Questions

AsiaQuest Themes	Description
Wk 1 – Unity & Diversity	This week focuses on studying aspects of China's population. What factors unify the Chinese population? What are the distinguishing characteristics of this culturally diverse population? What strategies have the people of China developed to help them live and work in harmony, and what tensions threaten this harmony?
Wk 2 – Stability & Change	This week focuses on time, continuity, and change. How can China modernize and improve life without losing the traditions, culture, and spirit that are unique to its population, and without threatening China's rich biodiversity?
Wk 3 – Cooperation & Conflict	China has experienced many forms of government over the centuries. Chinese society remains a unique blend of ancient principles and modern ideals. How do the people and ideologies work together in China? Are there tensions among them?
Wk 4 – Conservation & Waste	China's economic boom of the last decade has come with the costs of pollution, deforestation, desertification, and endangered species. What is China doing to address energy and food needs, as well as its ever-expanding population?
Wk 5 – Solutions & Resolutions	AsiaQuest focused on the mystery of Marco Polo's travels. The study of China forces us to think about our own lives, and reflect on what we have learned and what is yet to learn.

Table 5 – Themes & Inquiry Questions (summarized from Classroom Connect 1999)

Table 5 above summarizes AsiaQuest's themes and a description of inquiry questions that may guide students' research. Implementation of AsiaQuest allows teachers to attend to all themes, or focus on specific themes in more detail.

AsiaQuest Activities

Interactivity: Middle level teachers and students can experience several levels of interactivity including utilizing an extensive, web-based library of resources. The AsiaQuest site allows students to submit and review original artwork, communicate with other students using the Student Message Board, and email the Quest experts and expedition team to suggest travel and exploration routes. Viewing scholarly research and inquiry as an interactive process is one of the hallmarks of Classroom Connect Quests.

History Mystery: When researching a particular issue or subject, scientists and historians often accumulate more information than they need (Classroom Connect 1999). How do they determine which information is relevant? Have students solve today's History Mystery by using the Quest Library to conduct research. Have students report their findings to the class.

Dan's Dilemma: Read today's Dan's Dilemma. Have groups of students practice the art of diplomacy by work together to reach a compromise on diverse issues. Use evidence to support positions and to amend positions.

AsiaQuest in Students' Real World

One of the most powerful aspects of Quest projects involves making connections between the concepts and issues examined in the Quest and how those same issues relate to students' real world environments. The AsiaQuest themes described in this paper are just as relevant to students in their local community as to the Quest itself, and thus make the Quest a powerful social studies experience. For example, a people's history and culture, human influence on the environment, consumption and preservation of resources, human conflict

and cooperation, and historically-based questions and mysteries about the local community all help students conceptualize AsiaQuest issues by situating the issues locally.

Conclusion

This paper provided a qualitative document analysis of the Internet-based AsiaQuest project. Although the analysis focused on activities for the middle grades, the Quest is appropriate at some level for all students in grades K-12.

The analysis correlated selected themes from the National Council for the Social Studies standards to specific AsiaQuest activities. The analysis also highlighted the role of technology in bringing interactivity to students' research and inquiry. The high-tech, collaborative nature of AsiaQuest is best described by the AsiaQuest team leader:

> Did Marco Polo ever go to China? With the help of the Internet, a remote satellite dish, and the brainpower of a million or so online participants, we hope to find the answer (Classroom Connect 1999, p. 44).

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StarFestival: A Multilinear Approach to Cultural Identity

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StarFestival is a multimedia K-12 educational package developed at the Massachusetts Institute of Technology that engages students and their teachers in the issues of diversity and cultural identity. It is based on the personal narrative of its developer, Shigeru Miyagawa, who returned to Japan after a 30 year absence, to answer his own personal question of Who Am I? StarFestival engages the students in answering their own questions of Who am I? Where did I come from? and Where do I fit in?

Already adopted officially by the Boston Public School district for use in K-5, this program aids teachers in developing skills and knowledge that helps them to address issues of cultural identity in the classroom with confidence. The CD-ROM introduces teachers to a multi-linear narrative, which encourages student-directed learning by making it possible to incorporate the student's own personal quest for identity and acceptance. By encouraging the students' natural curiosity and interest in relating the program s personal narrative to their own lives, the StarFestival curriculum facilitates the weaving of the threads of common experience between students and the teacher as the class explores their cultural identities and family backgrounds.

The StarFestival curriculum centers on the CD-ROM, *StarFestival...a return to Japan*, which was awarded Best of Show at the MacWorld Exposition. The CD-ROM is accompanied by 14 books and workbooks. These situate the technology-enabled curriculum within the technology context of today's schools. These resources also tie the entire K-12 curriculum to the National Social Studies Standards. As Dr. Michael Hartoonian, co-author of the National Social Studies Standards, notes:

> "*The StarFestival CD-ROM and Curriculum make a dynamic connection between the complexities of content, as envisioned by the national standards, and students' engagements with meaningful and authentic narratives and intellectual mysteries.*" Michael Hartoonian, Co-author of the National Social Studies Standards, Former President of The National Council for the Social Studies and Professor, University of Minnesota

The StarFestival CD-ROM is the personal narrative of "the Professor," Shigeru Miyagawa, who left Japan when he was ten years old, then returns to his homeland to find his roots. He takes with him the hi-tech Personal Digital Assistant (PDA). As the CD-ROM opens, the user finds the PDA damaged in the street. Using an electronic field trip format, the user is able to trace the journey of the Professor to the far away land. The voice of the Professor is played by Mr. George Takei, "Mr. Sulu" of Star Trek. The authenticity of the material, and its personal nature, draws the students in to identity with the Professor, and encourages them to explore their own cultural identity while learning about modern Japan.

StarFestival has been developed over an eight-year period in Shigeru Miyagawa's laboratory for technology and education at MIT. The design for these technology-based aspects of StarFestival are based on research carried out at MIT over the past 15 years, including at the Media Lab, which was the source of some of the key members of the StarFestival development team. The development of the StarFestival package was supported by the National Endowment for the Humanities and the U.S.

Department of Education, as well as Canon and NEC. The overall cost of the project was approximately $3 million.

Along with the CD-ROM, there is a web site, http://sfn.mit.edu, which provides a cutting-edge, broadband interactive TV experience on the web based on some of the content from the CD-ROM. Taken together, the StarFestival package allows teachers and students to acquire skills in some of the most important areas of technology, including use of CD-ROM, web, email, and some web authoring. The StarFestival package is now available from StarFestival Inc. A detailed description of the product line is found at: www.starfestival.com.

Pilot tested by over 100 teachers across the USA, the program has received rave reviews from educators and students alike.

The curriculum surprises you by producing work and projects that just blow you away. Those are the magical moments in teaching that all teachers live for. I was able to experience that excitement with the StarFestival curriculum. The curriculum allowed the students to be the teachers. They put their talents to work and created incredible projects and presentations. Not only did we learn more about Japan, but also we learned more about each other and ourselves. Scott Clark, Educator

StarFestival is able to draw upon the skills and experiences of the teacher, to blend this with a creative use of technology and insights into the issue of cultural identity to create a program that is empowering to both the teacher and the students. It creates an environment of inclusion and exploration that brings forth the issues of cultural identity which is engaging and educational.

Using Presidential Candidate Web Sites for K-12 Lessons

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Abstract: The Bush and Gore web sites offer much in the way of resources for lessons in political science. This paper reviews the information available through these web sites. Then, these resources are tied directly to state standards to demonstrate how these resources can be used to meet benchmarks.

Introduction

This year's election proved to be perhaps the most exciting election in our nation's history. Political science teachers across the country are rejoicing at the fact that many of their students, current and former, finally understand the Electoral College and the intricate workings of the U.S. republic. As if 24-hour coverage and near total media attention on politics were not enough, this year has also given civics teachers another resource for information regarding the presidential election process and the issues on which the candidates ran. The World Wide Web emerged has a tool for presidential candidates.

During the 1976 election, my teacher asked my classmates and I to visit the campaign headquarters for Governor Carter and President Ford in our hometown. We returned to class with bumper stickers, buttons, and even the occasional T-shirt. These artifacts become important resources for our lessons regarding the American political process. With the World Wide Web, teachers and students can now visit the candidates' campaign headquarters and come away with much more than buttons and bumper stickers.

The Bush and Gore web sites offer much in the way of resources for lessons in political science. This paper will review the information available through these web sites. Then, these resources will be tied directly to state standards to demonstrate how these resources can be used to meet benchmarks.

Issues and Multimedia

Both Bush and Gore used web sites during the 2000 presidential campaign. This is a relatively new technique for presidential campaigns given that the World Wide Web was in its infancy during the last presidential race in 1996. Web sites allowed the candidates to present detailed stands on issues such as gun control, abortion, the economy, and defense. For each issue, the candidates published a web page that provided a detailed overview of their respective stands. For instance, Bush's page for education included 1,561 words worth of detail summarizing his principles of reform, reform proposals, and his record on education in Texas (Bush-Cheney 2000, Inc., 2000, November). It also included links to 12 position papers and four speeches. Gore's education page provided similar details (Gore/Lieberman, 2000, November 28). His page included 1,191 words of detail summarizing his positions on standards & accountability and investing more in public schools.

In addition to issue papers, these web sites also provided links to speeches, schedules of upcoming events, means for supporting the candidates, and means for contacting the candidates via e-mail. Many of the speeches are available in text, audio, and even video formats. These multimedia files are formatted for the most commonly used streaming programs and players for the files are available for downloading from both sites.

For the most part, these pages are designed for an adult audience although the vast majority of the content is certainly designed for a general audience. As with any web site, teachers must first fully explore the site to determine if the content is appropriate for their students.

"Just for Kids" and the "Youth Zone"

Early on in the presidential race, Gore saw the need for a youth oriented section of his web site. *His Just for Kids* section included a crossword puzzle, a short quiz about Al Gore and his family, and a sort of treasure hunt where children are asked to look for a picture of Gore's dog, Daisy, which was hidden somewhere in the web site. Although Gore's child oriented pages had little in the way of content related to the presidential race, they did offer some fun activities related to the campaign (Just for Kids, 2000, November 28).

Later in the race, Bush decided to add a *Youth Zone* to his web site. These pages offered a considerable amount of content and lesson oriented material related to the process of electing a president. For instance, the first option in the *Youth Zone* was a description of the presidential election process related to a baseball game (Youth Zone, 2000, November 28). This description used baseball as an analogy to understanding both the primaries and elections. Not to be outdone by Gore's dog, Bush also includes the history of his cat within these pages. The *Youth Zone* included a streaming media file of Texas First Lady Laura Bush reading a childrens book, *Officer Buckle and Gloria*. Most importantly, the *Youth Zone* offered a collection of external links including an Electoral College calculator and links to government related web sites for kids. My favorite was the Kid's Secret Zone at the Central Intelligence Agency.

Meeting the Standards and Benchmarks

More and more states are moving toward at least some standardization of curriculum accompanied by a corresponding set of exams for each grade level. To meet these standards, teachers develop lesson plans that directly address the specifics outlined by the state. For instance, Michigan has a complete set of K-12 Draft Standards and Benchmarks for all major content areas (Content Standards and Working Draft Benchmarks, 2000, November 28).

One of Michigan's standards requires students be able to explain local, state, and federal governments and how power is exercised within those frameworks. A specific benchmark from that standard requires that middle school students be able to "Evaluate information and arguments from various sources in order to evaluate candidates for public office" (SOC.III.4.MS.1). As part of a lesson plan used to meet this benchmark, students could visit a presidential candidate's web page, read the various issue papers, and then write a report that contrasts the candidates' views on specifics.

Web pages offer the ability to visit the campaign headquarters of each presidential candidate without leaving the classroom. Furthermore, students come away more than buttons and bumper stickers. They leave with detailed information regarding how each candidate proposes to govern. In a year with an exciting election, it only seems proper that educational opportunities are more exciting than ever.

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How is technology using in SS methods courses?

Frequency report.

Philosophy statement….leads us to the framework

Technology and teacher education framework.

Three levels:

For each level. We define and explain with SS examples and present frequency.

Level 3 – Teacher Educator

A Level 3 use of technology might involve a presentation by a *teacher educator* in a methods class. The technology in this instance could consist of several video examples of real classroom teachers teaching high school students about the Pythagorean theorem, using different instructional models (e.g., one teacher using direct instruction, a second using group work with concrete models, and a third using software). Such an approach would typically involve students in analyzing, critiquing, and contrasting the various instructional methods

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Level 2 – Teacher

An illustration of a Level 2 use might consist of a teacher educator preparing *teachers* to appropriately incorporate a movie about the Pythagoreans and demonstrate web-based interactive proofs of the Pythagorean theorem to enrich their teaching of the topic. Such enhancements add context and meaningful visual support to the theorem and its applications.

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Level 1 – K-12 Student

An example of a Level 1 use could entail a teacher educator preparing teachers to guide their K-12 *students* to use dynamic geometry software (e.g., the Geometers Sketchpad) to investigate right triangles and their properties to develop the theorem in ways not possible with pencil and paper. Such an approach typically engages students in construction and exploration of figures. Students make conjectures based on observations of dynamic manipulations and measurements and verify their conjectures.

35
43
45
46

Cross-tabs
k-12 teaching experience
elem, middle, secondary
majority of students

Technology and Social Studies Teacher Education – Results from a National Survey

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The beliefs and practices of College and University Faculty Members (CUFA) of the National Council for the Social Studies Social technology integration into teacher education were investigated using a questionnaire. This presentation will present the survey results and highlight methods of integrating technology into social studies methods courses.

The beliefs and practices of College and University Faculty Members (CUFA) of the National Council for the Social Studies Social technology integration into teacher education were investigated using a questionnaire. Analysis of the responses indicates use of technology in instruction remains low, and faculty remained undecided as to their philosophy of education. Computer training has had little impact on faculties, who have learned most things on their own except for html and multimedia programs, which most had never learned. Faculty reported being confidence in their personal use of technology as well as confidence in their use of technology resources in education. The exception to this was the use of videoconferencing and the use of spreadsheets and databases. The presenters of this session will present the survey results and highlight methods of integrating technology into social studies methods courses.

Methods

We analyzed the data from the Likert-type format by descriptive statistics (i.e. means, standard deviations, percentages, and frequencies) and by *t* tests. Short-item responses were analyzed by descriptive statistics. Data from the open-ended questions were subjected to a content analysis procedure. Responses were analyzed as whole-item units, and designated a code based on the theme they represented.

Computer use

Philosophy is important in that it is related to how often faculty use technology. Computer use is higher among those who believed in providing students with technology-related instruction. The mean computer use for these respondents is 35.06 (SD = 8.6), whereas the mean for those who believe in providing students with technology skills was 31.6 (SD = 9.8). Those who believed in neither philosophy had a mean of 27.7 (SD = 8.6), which is much lower than the others. Those who believe in providing students with technology-integrated instruction were more likely to rate their general use of technology as 'intensive' (n = 17), whereas those who believe in providing students with technology skills were more likely to select 'occasional' (n = 18).

Computer use by faculty in instruction is on the medium to low side. A little more than two in five (42%) respondents claim to use computers occasionally in instruction. One in five (19.8%) used computers throughout the semester, although not every class session, and only one in seventeen (6.2%) used computers every class session. When Social Studies faculty do use technology, it is to prepare lesson plans or communicate with others via email. Videoconferencing, spreadsheets, databases and technology tools are hardly used. Faculty report that their pre-service students use technology in a similar fashion. *Table 1* shows the percentage of those who reported on their own and their student's use of technology 'thoroughly' or 'every' class session. It is arranged in descending order. There is no difference in how often professors, associate professors, assistant professors and instructors use computers.

Confidence

Taken together, faculty report being confident in their use of technology. Seven in ten (69.8%) respondents agreed or strongly agreed that they were confident using computers in many settings whereas one in three (27.1%) did not feel confident.

Faculty report that they have the greatest confidence in using email and the Internet to support individual or small group work. These were also the technologies that were used the most. More than half of faculty report being confident in incorporating the WWW and email in instruction, using computers in many settings, choosing effective instructional software/technology tools, teaching search strategies for use on Internet and CD-ROMs, implementing resources to support SS teacher education, teaching students to prepare lesson plans that access information via networks and modems, teaching students to select and use technology appropriate to task, teaching students to prepare lesson plans that use electronic encyclopedias and catalog, developing computer based presentations for use in instruction, teaching students to prepare lesson plans incorporating word processors, spreadsheets and databases in instruction, and working with K-12 teachers to integrate technology in local schools.

Only preparing word-processed lesson plans, communicating via email, and accessing information from the web were actually used with any frequency. There is also much reported confidence but have the greatest lack of confidence in videoconferencing. Faculty have very low confidence in preparing student's to use spreadsheets and databases, and to use videoconferencing. Faculty who believe in providing students with technology-integrated instruction (n = 4) were far less likely than those focusing on technology-skills (n = 16) to strongly disagree that they were confident using spreadsheets and databases. No other measure of confidence in the use of technology had such a large spread when philosophy is looked at.

Web-based Delivery of a Generic Research Methods Module (for Social Sciences): The Graduate and Post-Graduate Experience.

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Abstract: One educational development approach at Liverpool John Moores University (JMU) from its Business School (LBS) is that of supported web-based learning systems to complement traditional teaching. This paper focuses on recent work at LBS concerning a Masters module, which progressively developed since 1998. The module is web-based and provides a teaching, learning and support environment for academic staff and students. It is flexible in that it is variably credit rated and can be studied in full-time, part-time and distance modes. The approach used in the delivery of the module has facilitated the examination of module/programme support development possibilities on the web from academic, quality and commercial perspectives as well as the cybernetic and evolutionary nature of learning. A feedback model is developed here to inform development of a support web-site. An exploration of student attitudes and perceptions to the technology, factors related to the learning strategies adopted by students and student learning styles were used to inform an over-pinning LBS strategy of a web supported teaching and learning environment, coupled with an innovative longitudinal support mechanism for learners.

INTRODUCTION

Throughout the late 1980's towards the middle 1990's educational technology developments in the UK developed from Open Learning (text based), through to Computer Assisted Learning (CAL), which included software and hypertext on CD-ROM and file servers. This can be collectively referred to as Resource Based Flexible Learning (McClelland 1996). Traditionally one might argue that this concept considers learning to be student centred as opposed to tutor centred, where learners provide their own routes through a learning domain negotiating a set of learning events. This maximises flexibility for the learner in the way learning occurs. However, pedagogically it may not be appropriate to provide a learner with total unconstrained flexibility in a RBFL environment. This has been put concisely by (Boot & Hodgson 1990) in their discussion on constraining open learning:

"A definition [of open learning] revolves around a notion of freedom from constraints on the learning process... such constraints are grouped as administrative (time, duration, cost, etc.) and educational (objectives, methods, sequencing, entry qualifications, assessment, etc.)...The removal

of all constraints would ...leave us with no educational provision at all. The issue then is less one of openness and more one of the extent to which formal educational provision has bounded learning."

Interest about the learning environment and the personal attributes of the learners continue to concern developers of learning environments, especially where RBFL is an issue. In the early 1990's this was particularly the case for those with interests in the resource of computer assisted learning (CAL), because the utility of CAL was sometimes a point of debate about how it could contribute to understanding, as we observe it, in a currently limited state of development. More generally, arguments about how learning environments could constrain learners in the way that they learn, or free them to explore, were seen to be as much about socio-culture and paradigms, as about pedagogy. The identification of constraints and degrees of learner freedom is something that is a concern of architects of learning environments (for example, groups of course tutors). In the mid to late 1990's studies (McClelland 1994 and McClelland & Yolles 1997), concerning CAL, demonstrated that constraints derived from a learning domain paradigm provide for that environment a set of learning "truths" that will determine overall learning strategy. It is this paradigm that will act as the set of macroscopic constraints for learners. Different paradigms operate in different levels of system, from courses; to course programmes.

Most learning theory centres on the work of (Kolb 1974 & 1984) but it is feasible to look further afield by examining learning environments as though they are systems, and move slightly away from the traditional language of learning theory. This research aims to report a systemic approach towards modelling learners and learning environments based on the ideas that derive from theories of viable systems, exposed by cybernetic learning environments (McClelland & Yolles 1997). In this case viable means able to maintain a separate (fully or partly autonomous) existence. Viable systems therefore participate in the development of their own futures through self. The idea of viable inquiry systems was identified in order to explore the nature of methodology in its relation to method, in particular with regard to the impact of the learner on the situation being inquired into. In parallel the idea of Viable Learning Systems can be developed. These can be seen as learning systems that include cybernetic learning strategy and learning style as well as approach to study (deep, surface, reproducing learning) and where change in these can be explained through ideas from the concepts of self-organisation and evolutionary theory.

APPROACH TO DELIVERY

With current developments in technology and learning supports for modules and programmes and with the rapidly changing means by which students access information, a strategy exists within LBS to develop web-sites for undergraduate, postgraduate and professional students studying modules. The strategy uses a design and template developed by (Laws 1998) which is learner friendly (to students) and addresses some of the constraints placed upon learners, such as time of study, place of study, interaction with a tutor and availability of scarce resources. Also it is design friendly (to academics), being accessible for authoring purposes in the universities campus wide information system structure. The results of a follow up study on one module, developed to the Laws template are reported here. The Research Methods module, code BUSAEM303 (see http://cwis.livjm.ac.uk/bus/busrmccl/aem303) has a web-site developed by (McClelland 1998).

This paper presents some perceptions,and attitude observations of students and staff concerning use of the web-site. In addition an evaluation of the cost benefits, pedagogical appropriateness and effectiveness as a support in developing students as researchers, is also made.

The web-site for the module contains the following supports:

Learning supports:
Course outline and recommended texts; A copy of the module assessment, with links and supports; Staff profile/contact details, an e-mail link; Links to other web-sites (learning & research and international); Notice board; Sources of Information and a Research glossary

Activity based supports:
Fifteen topic areas with hypertext links to: Lecture notes; Lecture presentations; Workshop/Case questions; Individual learning resources; Articles on-line.

The module can be 12 credits, 15 credits or 20 credits in size (120, 150 and 200 learning hours respectively) supported through 10 or 15 one-hour lectures and 10 or 15 two-hour problem based learning tutorials/workshops. The module is assessed by producing a research proposal for a Masters level dissertation (size of assessment related to credit rating).

LEARNER PERCEPTIONS OF THE WEB-SITE

Liverpool Business School has undertaken several studies involving students that have used the web-site template for a range of modules see (McClelland 2000a & 2000b). As part of the overall studies of web-based learning in LBS a questionnaire was developed and used as a vehicle to gauge student perceptions and qualitative information, in order to refine the design and content of subsequent sites.

A modified version of the above questionnaire was administered to a cohort of students studying the Research Methods module in semester one of the 2000/01 academic year. Of the eighteen students on the cohort twelve were full-time students on a one-year programme in European Studies and six were part-time students on a two-year programme in Leisure and Tourism Management. Some preliminary findings, as extracts, are evaluated here as contributions to developing the web-site.

In addition to the questionnaire students completed a learning styles inventory adapted from Kolb and McCarthy (Kolb 1984). The inventory is designed to explore the way people prefer to learn by indicating statements that refer to their learning predispositions. Scores are obtained and from these dominant learning abilities can be deduced. These fall into four main groupings; *Abstract Conceptualisation* (AC), *Active Experimentation* (AC), *Concrete Experience* (CE) and *Reflective Observation* (RO).

As well as being part of this research, learning style theory is included as an input to the philosophy of research on the Research Methods module [1].

Pairings of learning predispositions enables participants to be located in learning style quadrants. So, for example, if dominant learning abilities are *AC* and *AE* the student would be a *Converger* (practical application of ideas). *CE* and *RO* would indicate a *Diverger* (imaginative ability). *AC* and *RO* would indicate an *Assimilator* (ability to create theoretical models). *CE* and *AE* would indicate an *Accommodator* your greatest strength lying in doing things, in carrying out plans and experiments and involving oneself in new experiences.

Student accessibility to the site and guidance given about the site were not factors in the amount of time they spent using the sites. The cohort also indicated that necessary information provided on the sites did not suffer from problems of clarity. A series of questions presented surrounding frequency of use of the sites showed no effects from the *gender; age;* and *current degree mean mark* .

It was observed from findings that there were no differences for either of the variables *gender* or *international category of student* when tested against perceptions of *ease of use of the site, clarity of design of the site, the responsibility or restriction of self-directed nature of learning* and the *student agreement on provision of administrative support.* These observations were made using independent t-tests ($p > 0.05$).

However, when the variable *Programme* (European Studies and Tourism and Leisure Management) was tested against each of the above perception variables, no differences were observed with one exception, students on the Masters in European Studies were between Responsible and Neither responsible or restricted for self-directed learning (mean 2.17) rather than students on the Masters in Tourism and Leisure Management who were between Very responsible and Responsible (mean 1.5). Theses observations were made using an Independent t-test ($p > 0.05$), the latter difference was supported using the same test ($p < 0.05$).

The same set of perception variables were tested against the variable *student learning styles* and the variable *age groups* ($21 < 24$, $24 < 27$, $27 < 30$, > 30). No effects were observed based on *learning styles* or *age*. These observations were made using One-Way Analysis of Variance ($p > 0.05$).

Other observations included student perceptions on the importance of focused web-site supports, which included: *Other web-sites to visit; Other web-sites to visit (international); Learning Supports; Lecture slides; Sources of Information* and *Glossary of terms*.

No differences were observed with supports tested against the variable *mode of study* (Full-time, Part-time) with one exception, *Other web-sites to visit (International)*, where part-time students perceived the facility between neutral and not very important (mean 3.17) rather than full-time who were between Very important and Important (mean 1.92). The observations were made using an independent t-test ($p > 0.05$), the latter difference was supported using the same test (p

[1] Lectures on the Research Methods module involves the discussion that a predisposition to particular learning styles have implications for philosophies that researchers may adopt.

< 0.05).

No effects were observed with supports when tested against *student learning styles* with one exception, *Other web-sites to visit*, where students exhibiting the style of *Diverger* perceived the facility as of differing importance than students who exhibited styles of *Accommodator*, *Assimilator* and *Converger*. The observations were made using a One-Way Analysis of Variance ($p > 0.05$), the latter difference was supported using the same test ($p < 0.05$).

Extensions of these studies will ultimately allow learning strategy to be related to student learning styles and approaches to study. The model proposed here incorporates observations to support design and content developments for the module.

In terms of the cost benefits, the module has resulted in savings of approximately £4 - 5000 per delivery on resource items such as photocopying handouts and staff time per module, whilst students perceive increases in quality and support.

CONCLUSION: MEETING CHANGING NEEDS

The stated aims of the module are to plan and design research linked to certain research philosophies. The assessment for the module is to produce a Research Plan and Proposal for Masters Dissertation.

Three paradoxes are observed here:

1. The link between the aims and assessment for the module. The assessment does not focus on the learners' ability to directly undertake research, rather, the focus is on the learners' ability to plan and design research linked to certain research philosophies.
2. The teaching of the module. Due to the generic nature of this module and the diversity of student backgrounds, teaching challenges arise concerning the depth and breadth of analytical approaches to be delivered in contact sessions, the subject matter taught and the prior knowledge that is assumed from learners.
3. The relationship between the needs of students and research support for learners. This highlights that clearly there is a need for learners to use supports after the learning outcomes have been met for the module, in order to support to their actual research beyond the module.

In developing the module and the approach to delivery the above factors were incorporated as well as the following: The generic requirements for Masters level study; A range of team curriculum design inputs; Feedback from previous cohorts of LBS students using web-based supports. As the supports for the Research module are web-based, many of the above concerns are being addressed through the design platform. The web-site contains cases and links to both qualitative and quantitative articles, there are links to lower level undergraduate modules covering research methods and related disciplines, as well as on-line support materials. All supports are chosen for related content and are regularly updated; there are facilities to explore

analytical disciplines and research approaches in depth (as well as breadth), in order to fully inform and support learners as they develop in research.

Access to the web facility is unconstrained It is regularly updated (in terms of lecture material, links and versions of analysis tools). There are also email links for tutor consultation.

The architect of learner supports and the learner derive benefit through the tailored design of the web-site, based on learner feedback, having supports available outside of the constraints of time and place and from the facility of both subject depth and breadth beyond the lifetime of the module. This model is used to foster a medium of a more holistic multi-faceted approach to developing students as researchers.

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Multimedia Resource File: A Practical Project for Preservice Teachers

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Abstract: The Multimedia Resource File Project is used to allow students to practice and demonstrate integration of advanced technology and content skills in planning and organizing an instructional resource for high school teaching. The student will develop advanced skills in searching the web, evaluating and selecting resources, dealing with copyright issues, organizing resources, and producing a CD product.

Introduction

The National Educational Technology Standards (ISTE, 2000) consist of six general areas: (I.)Technology Operations and Concepts; (II.)Planning and Designing Learning Environments and Experiences; (III.)Teaching, Learning, and the Curriculum; (IV.)Assessment and Evaluation; (V.) Productivity and Professional Practice; and (VI.) Social, Ethical, Legal, and Human Issues. In a preservice teacher education program, there is a need for major projects that allow students to show proficiency in these areas. The following project, the Multimedia Resource File, includes experiences in all six of the goal areas. Once students have completed this project, they should easily be able to implement it in a high school setting. Thus, in planning and implementing this one major project the preservice teacher can address all six of the NETS goals. This may be a part of the Methods course, or a Technology course. Or it may be a departmental capstone requirement that is not a part of either course, but uses elements from both.

Assignment

In consultation with an advisor, the student selects a general topic as the subject of the project. The topics that will be demonstrated are "The Civil Rights Movement," and "The Vietnam War." Both of these topics provide a rich context for multimedia resources because they are fairly recent and primary sources are available.

The student then conducts an exhaustive Internet search for resources related to the topic. These may include text, graphics, audio (speeches, protest songs), video (news broadcasts), or links to webpages. Each resource is carefully evaluated and included only if it is judged to be of value to a high school teacher. A critical part of the project is that the student obtains permission to use all copyrighted material. The resources are then arranged by subtopics, indexed clearly, and burned to CD.

The objective of the project is not to plan a lesson or unit, but to collect resources that may be used in future lessons that may involve PowerPoint or WebPages or other media. The student will develop advanced skills in searching the web, evaluating and selecting resources, dealing with copyright issues, organizing resources, and producing a CD product.

Assignment: Multimedia Resource File

Objective: Student will design and produce a Multimedia Resource File, which utilizes expertise in technology and in content to locate and select appropriate resources for a topic in the high school curriculum. The project will involve advanced Internet searching and evaluation of resources, including copyright permissions. It will also involve advanced technology skills in organizing and producing a data CD, as well as advanced content expertise is selecting and planning instruction.

Activities:

1. Select a topic from your content area's high school curriculum. Discuss topic with instructor.
2. Conduct an extensive Internet search for multimedia resources (text, graphics, audio (speeches, protest songs), video (news broadcasts), or links to webpages) that may be helpful in teaching that topic.
3. Obtain copyright permission for EACH resource.
4. Organize the file. Discuss outline with instructor.
5. Arrange resources in folders and subfolders. Create an html document that serves as an index, and includes links to resources either on the CD and to webpages on the Internet.
6. Burn the CD.
7. Include a self-evaluation, using the rubric below.

Scoring Rubric: (10=A, 8-9=B, 6-7=C, 5 or less=F)

- **Content** (5 points possible)
  - 5 points: Topic is appropriate for high school course. The topic is completely covered and a wide variety of types of resources are included. Resources are well organized. Copyright permissions are included.
  - 4 points. Topic is appropriate. Topic is well covered and a variety of resources are included. Resources are well organized and copyright permissions are included.
  - 3 points: Topic is appropriate. Topic is covered and some variety of resources are included. Resources are organized and copyright permissions are included.
  - 2 points: Topic is appropriate. Topic has weak areas and variety of resources is limited. Problems with organization. Some copyright permissions are not included.
  - 1 point: Topic is appropriate. Topic has many weak areas, and resources are limited in number and in variety. Organization is poor. Copyright permissions are not included.

- **Technical** (5 points possible)
  - 5 points: CD runs without error. Html table of contents includes outline and links to resources on the CD as well as links to Internet pages. All resources display without error.
  - 4 points: CD runs without error. Html table of contents links are without error. Most resources display without error.
  - 3 points: CD runs. Html table of contents has some errors. Most resources display without error.
  - 2 points: CD runs. Html table of contents has many errors. Many resources have errors.
  - 1 point: CD runs. Table of contents is missing or does not work.

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The increase in the use of computer-based instruction in education and the proliferation of middle schools occurred concurrently in the 1980's. Computer-based instruction was viewed as a new learning tool, which could facilitate a variety of new teaching strategies for educators to employ in the classroom. The formation of middle level education was seen as an attempt to establish meaningful learning for the segment of schooling that encompasses early adolescence at the stage of life between the ages of ten and fifteen (National Middle School Association, 1995). The symbiotic relationship and development of these two educational entities commenced in the 1980's and continues at the moment. The purpose of this study was to determine the frequency and the nature of applications of computer-based instruction in the middle school social studies classrooms in the state of Missouri.